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Junction City School District Population and Enrollment Forecasts, 2013-14 to 2022-23

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JUNCTION CITY SCHOOL DISTRICT
POPULATION AND ENROLLMENT FORECASTS
2013-14 TO 2022-23



FEBRUARY, 2013

**JUNCTION CITY SCHOOL DISTRICT
POPULATION AND ENROLLMENT FORECASTS
2013-14 TO 2022-23**

**Prepared By
Population Research Center
Portland State University**

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FEBRUARY, 2013

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EXECUTIVE SUMMARY

This report details a range of three scenarios of district-wide enrollment forecasts by grade level for the 10 year period between 2013-14 and 2022-23. Each enrollment forecast scenario is related to population forecasts that incorporate different assumptions about growth within the District, with the primary differences being the contribution of net migration to the District's population and age distribution. The forecasts rely on enrollment trends observed through Fall 2012, local area population, housing, and economic trends, and forecasts of population and housing from other studies for Lane County and the City of Junction City.

Enrollment Trends

Fall 2012 total K-12 enrollment of 1,678 was within 15 students, or one percent, of the District's total enrollment in each of the three previous years. District-wide enrollment is now 389 students (19 percent) lower than the peak 14 years ago, in the 1998-99 school year. The largest recent enrollment losses occurred after the 2006-07 and 2007-08 school years, upon the graduation of two relatively large high school classes. Since 2008-09 the District has experienced relatively stable K-12 enrollment, with a net gain of 36 students (2.2 percent) over the four year period.

Our previous demographic study for the District was prepared during the 2006-07 school year, and its three enrollment scenarios extended to a five year horizon through 2011-12. Actual K-12 enrollment in 2011-12 was well below the MIDDLE and HIGH range forecasts prepared in 2007, and very close to the LOW forecast. That LOW forecast assumed that housing growth would slow from the development boom that was occurring at the time. Housing development did slow, and construction of the prison and State Hospital did not occur within the timeline anticipated several years ago. Even the LOW scenario did not foresee the coming recession, or its toll on the area's largest industry, motor coach production.

District-wide Enrollment Forecast

In the LOW range forecast for 2013-14 to 2022-23, total K-12 enrollment falls by 33 students (two percent) over the 10 year period. This forecast may be the most accurate under a scenario in which neither the prison nor the State Hospital is built, no other large scale economic

development occurs in or near Junction City, and the region's job market fails to recover, resulting in limited demand for new housing within the District.

In the MIDDLE range forecast, K-12 enrollment growth averages 0.5 percent annually, and total enrollment increases by 93 students to 1,771 in 2022-23. This scenario is consistent with the expected construction of the State Hospital scheduled to open in 2015, along with other new employment centers such as the prison or new industrial development. Housing growth would occur in future new subdivisions within the existing Junction City Urban Growth Boundary.

In the HIGH range forecast, K-12 enrollment growth averages 1.5 percent annually, and total enrollment increases by 272 students to 1,950 in 2022-23. This scenario is consistent with the expected construction of the State Hospital, the prison planned to open in 2017, and significantly higher demand for new housing within Junction City.

Table 1 summarizes the Junction City School District's recent and forecast K-12 enrollments by five year intervals under the three scenarios. Chart 1 depicts the District's 10 year K-12 enrollment history and the 10 year K-12 forecasts. Table 2 details the MIDDLE series forecast by grade level groups. More details of the forecasts are presented in the "Enrollment Forecasts" section and in Appendix A.

Table 1
Historic and Forecast Enrollment
Junction City School District¹

School Year	LOW		MIDDLE		HIGH	
	Enroll-ment	5 year change	Enroll-ment	5 year change	Enroll-ment	5 year change
2002-03	1,902		1,902		1,902	
2007-08	1,731	-172	1,731	-172	1,731	-172
2012-13	1,678	-53	1,678	-53	1,678	-53
2017-18 (fcst.)	1,648	-30	1,717	39	1,775	97
2022-23 (fcst.)	1,645	-3	1,771	54	1,950	175
AAEG ² , 2012-13 to 2022-23	-0.2%		0.5%		1.5%	

1. District total does not include tutored and out of district students.

2. Average Annual Enrollment Growth.

Source: Historic enrollment, Junction City School District; Enrollment forecasts, Population Research Center, PSU. January 2013.

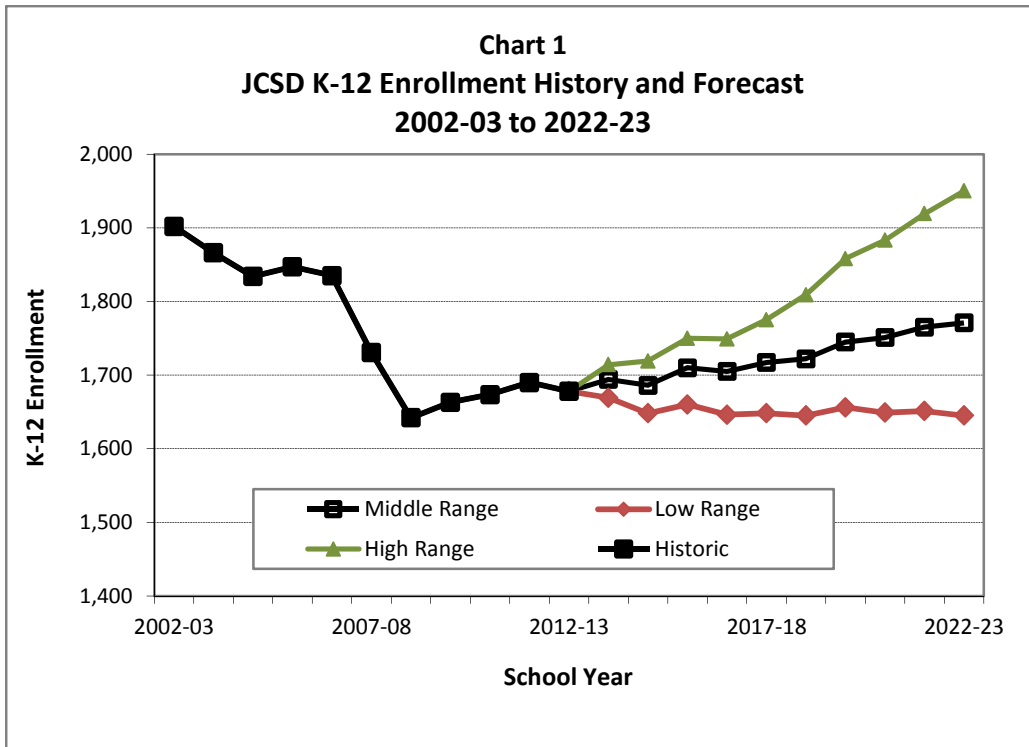


Table 2
Historic and Middle Range Forecast Enrollment
Junction City School District

	Actual			Forecast	
	2002-03	2007-08	2012-13	2017-18	2022-23
Grades K-5	778	747	761	785	801
5 year change		-31	14	24	16
		-4.0%	1.9%	3.2%	2.0%
Grades 6-8	477	393	387	394	411
5 year change		-84	-6	7	17
		-17.6%	-1.5%	1.8%	4.3%
Grades 9-12	647	591	530	538	559
5 year change		-57	-61	8	21
		-8.7%	-10.2%	1.5%	3.9%
Total	1,902	1,731	1,678	1,717	1,771
5 year change		-172	-53	39	54
		-9.0%	-3.0%	2.3%	3.1%

District total does not include tutored and out of district students.
Actual: Junction City School District, September 30 quarterly report information.
Forecast: Population Research Center, PSU, January 2013.

INTRODUCTION

The Portland State University Population Research Center (PRC) has prepared long range enrollment forecasts for the Junction City School District (JCSD) based on historic enrollment data through Fall 2012. PRC's previous enrollment forecasts for JCSD were prepared in February, 2007, for a five year horizon ending in 2011-12. This study integrates information about JCSD enrollment trends with local area population, housing, and economic trends, and includes a range of three scenarios of district-wide enrollment forecasts by grade level for the 10 year period between 2013-14 and 2022-23. Information sources include the U.S. Census Bureau, birth data from the Oregon Center for Health Statistics, geographic shape files from Lane Council of Governments, population forecasts from PRC and the Oregon Office of Economic Analysis, employment trends from the Oregon Employment Department, and housing development and planning data from the City of Junction City.

The District serves the City of Junction City and surrounding unincorporated area from the Willamette River to the Coast Range foothills and from the Lane-Benton county line to the northwestern edge of the City of Eugene. The District's boundary includes the community of Cheshire, as well as about 170 homes within the City of Eugene, near River Road and Beacon Drive. Nearly all those homes within Eugene were built between 2002 and 2008.

Following this introduction are sections presenting recent population, housing, employment, and enrollment trends within the District and the relationship between enrollment and housing. Next are the results of the district-wide enrollment forecasts and individual school forecasts, and a description of the methodologies used to produce the forecasts. The final section contains a brief discussion of the nature and accuracy of forecasts. Appendices contain detail of the three forecast scenarios and a five page profile showing the District's population and housing characteristics from the 2000 and 2010 censuses.

POPULATION, EMPLOYMENT, AND HOUSING TRENDS

Between 2000 and 2010, total population within the JCSD grew by 3.5 percent, from 11,809 persons to 12,218. This growth rate was less than Lane County's 8.9 percent growth rate in the decade. From 2000 to 2010, the City of Junction City added 671 persons, while the District's unincorporated area population fell by 570. Table 2 shows the figures for 2000 and 2010, as well as the very slow growth experienced by both Lane County and the City of Junction City since 2010.

The City of Junction City's share of the District's population was 40 percent in 2000, and increased to 44 percent in 2010. A majority (53 percent) of the District's current students live with the City Junction City. The City of Eugene is home to just over three percent of JCSD residents but fewer than one percent of its students.

Table 3
City and Region Population, 2000, 2010, and 2012

	2000	2010	2012	Avg. Annual Growth Rate	
				2000-2010	2010-2012
City of Junction City ¹	4,721	5,392	5,445	1.3%	0.4%
City of Eugene ²	91	399	N/A	15.9%	
JCSD Remainder ³	6,997	6,427	N/A	-0.8%	
JCSD Total	11,809	12,218	N/A	0.3%	
Lane County	322,959	351,715	354,210	0.9%	0.3%

1. The land area of the City of Junction City increased from 1.4 square miles in 2000 to 2.4 square miles in 2010. There were 69 residents living in annexed areas at the time that annexations occurred.

2. Portion of the City of Eugene in the School District.

3. JCSD total population minus City of Junction and City of Eugene Portion.

Sources: U.S. Census Bureau, 2000 and 2010 censuses aggregated to JCSD boundary by PSU Population Research Center; Portland State University Population Research Center, July 1, 2012 estimates.

Employment

The District is part of the larger Eugene-Springfield area labor market, and is also within commuting distance of employment centers in Linn and Benton Counties. In 2006, 24 percent of JCSD residents who were employed in the private sector worked within the boundaries of the District itself. Since then, the loss of local jobs means that fewer residents are employed, and

many of those who are employed must travel farther to work. Table 4 reports the number and share of JCSD residents by where their jobs are located.¹ The most recent data, for 2010, show that only 17 percent of JCSD's residents work within the District. Among private sector workers residing in the JCSD, 34 percent worked in the City of Eugene. Some workers, such as the self-employed and most federal employees, are not included in the data. In some cases the employer's location is used rather than the actual work site. However, the data represent the home to work flow for most workers.

Table 4
Where JCSD Residents Are Employed, 2010

Job Located Within*	Workers	Share
Lane County	3,464	72%
Junction City School District	819	17%
City of Junction City	537	11%
City of Eugene	1,667	34%
City of Springfield	377	8%
Linn County	300	6%
Benton County	194	4%
Marion County	160	3%
All other locations	723	15%
Total Primary Jobs	4,841	100%

**Note: Indentation indicates that the area is also included within the area above it. For example, workers in the City of Junction City are also counted in the JCSD and in Lane County.*

Source: US Census Bureau, LED Origin-Destination Data Base (2nd Quarter 2010). Jobs covered by unemployment insurance, generally excluding federal government, agricultural, self-employed and domestic workers. Includes at most one (primary) job per resident.

Table 5 shows that the number of private sector jobs located within the District's primary ZIP codes reached a peak in 2004 and 2005, and plunged after 2008 when the area's largest employers shut down. Oregon Employment Department Regional Economist Brian Rooney tabulated total private-sector payroll for Lane County and selected cities for the 2006 to 2011 period, finding that:

“All areas lost payroll during the recessionary period. However, two cities stand out for the severity of their payroll loss. Between 2007 and 2009, Coburg lost about \$60 million,

¹U.S. Census Bureau, LED Origin-Destination Database (2nd quarter 2010). Commute shed report for residents of JCSD. Includes workers at firms covered by unemployment insurance (excludes most agricultural jobs and self-employed). <http://lehdmap.did.census.gov/>.

or around 58 percent of the payroll produced in its city limits. Similarly, Junction City lost around \$53 million or 56 percent of its payroll between 2007 and 2010. Aside from the losses in other industries due to the recession, these cities were adversely affected by the loss of employment in the RV manufacturing industry.”²

Furthermore, while countywide payroll increased in 2011, Coburg and Junction City remained at about the same level as in 2010.

Lane County’s seasonally adjusted unemployment rate dropped to 8.2 percent in December 2012, down 0.8 percentage point from the 9.0 percent recorded in December 2011. The number of unemployed was 1,396 lower than in December 2011.³

Table 5 Private Sector Employment, 1998 to 2010 Establishments in ZIP Codes 97448 and 97419	
Year	Number of Employees
1998	3,492
1999	3,679
2000	3,679
2001	3,415
2002	3,168
2003	3,215
2004	3,788
2005	3,803
2006	3,674
2007	3,676
2008	3,695
2009	2,175
2010	2,251

Source: U.S. Census Bureau, County Business Patterns, ZIP Code Business Statistics. Excludes most government employees, railroad employees, and self-employed persons.

Births

Due to the relatively small population within the JCSD, the number of births is subject to wide annual fluctuations. In 2007 when the local economy was strong, there were more births than

² “Lane County Payroll Trends.” Oregon Employment Department, November, 2012.

³ “Lane County Labor Trends, February 2013.” Oregon Employment Department.

in other years before or after. Many of the children born that year may now be enrolled in District kindergarten classes. While it is difficult to discern a clear trend for the District itself, the number of births fell more than eight percent in the U.S., Oregon, and Lane County between 2007 and 2011.⁴ The Pew Research Center’s analysis of multiple economic and demographic data sources confirms the close correlation between the economic downturn and the nation’s fertility downturn.⁵ The number of births to Lane County and JCSD residents each year is reported in Table 6. In the “Enrollment Forecasts” section of this report we will examine the relationship between births, migration, and subsequent school enrollments.

Table 6 Annual Births, 2000 to 2011 Lane County and Junction City SD		
Year	Lane County	JCSD
2000	3,703	133
2001	3,585	139
2002	3,494	133
2003	3,754	122
2004	3,489	120
2005	3,501	105
2006	3,707	135
2007	3,776	164
2008	3,784	101
2009	3,573	113
2010	3,495	137
2011	3,469	132
<i>Source: Oregon Center for Health Statistics published county and zip code data; PSU-PRC estimates for JCSD also use birth records geocoded within the district.</i>		

Housing Growth and Characteristics

During the 2000 to 2010 period, the District added nearly 500 housing units, as shown in Table 7. The smaller increase of about 400 households (occupied housing units) was due to a small

⁴ “Births: Preliminary Data for 2011.” National Vital Statistics Report, Volume 61, Number 05, National Center for Health Statistics; *Oregon Vital Statistics Annual Report 2011 Volume 1*, Oregon Health Authority, Center for Health Statistics.

⁵ “In a Down Economy, Fewer Births.” Pew Research Center, Pew Social & Demographic Trends, October 2011. Also, “U.S. Birth Rate Falls to a Record Low; Decline Is Greatest Among Immigrants.” Pew Research Center, Pew Social & Demographic Trends, November 2012.

increase in vacancy rates, from 5.0 percent in 2000 to 6.0 percent in 2010. Vacant units designated “for sale or rent” in 2010 were just 2.7 percent of the District’s housing units, not significantly different from the 2.5 percent observed in 2000.

The trend most pertinent to school enrollment was the net decrease of 191 households with children under 18 during the 10 year period from 2000 to 2010, more than reversing the previous decade’s 94 household increase. The share of households with children fell from 37 percent in 1990 to 35 percent in 2000 and 28 percent in 2010. The average number of persons per household also decreased, from 2.63 in 1990 to 2.60 in 2000 and 2.47 in 2010. Factors contributing to the decreases in household size and share of households with children include the rapid growth in the population age 45 and over and declining fertility rates.

Table 7
Junction City School District
Housing and Household Characteristics, 1990, 2000, and 2010

	1990	2000	2010	10 year Change	
				'90-'00	'00-'10
Housing Units	4,161	4,731	5,214	570	483
Households	4,032	4,494	4,903	462	409
Households with children < 18 <i>share of total</i>	1,478 37%	1,572 35%	1,381 28%	94	-191
Households with no children < 18 <i>share of total</i>	2,554 63%	2,922 65%	3,522 72%	368	600
Household Population	10,591	11,666	12,125	1,075	459
Persons per Household	2.63	2.60	2.47	-0.03	-0.12

Source: U.S. Census Bureau, 1990, 2000, and 2010 Censuses; data aggregated to JCSD boundary by Portland State University Population Research Center.

The 2007 report included a table with several recently platted or pending subdivisions containing lots for over 400 new homes. According to information provided by City Planner Stacy Clauson, homes have been built or permits have been issued for homes on over 300 of those lots. Some of the smaller subdivisions listed in the 2007 report have been completely built out. Homes have been built on a majority of lots in the two largest subdivisions, the 145 lot Raintree Meadow and the 97 lot first phase of The Reserve (formerly known as Oaklea Meadows). Several homes are currently under construction in these two, including homes for sale, indicating some renewed confidence in the market for speculative building. As of

December 2012 there were 14 vacant lots remaining in The Reserve, 48 in Raintree Meadows, and 33 in other subdivisions from the 2007 list. One newer subdivision was approved after the 2007 report, the seven lot Sather Place, at West 12th Avenue near Yew Street, in which five buildable lots remain.

Residential building permit activity within the City of Junction City each of the past 13 years is presented in Table 8. The table shows that in spite of the economic slowdown, homebuilding has generally occurred at a greater pace since 2007 than before.

Table 8 Privately Owned Housing Units Authorized by Building Permits		
Year Permit Issued	City of Junction City	
	Single Family	Multiple Family
2000	15	-
2001	12	-
2002	34	-
2003	13	-
2004	10	-
2005	13	-
2006	8	-
2007	78	-
2008	43	4
2009	37	-
2010	56	-
2011	13	-
2012 (preliminary)	37	-

Source: Junction City, Department of Community Development (2000-2007); U.S. Census Bureau, Residential Construction Branch (2008-2012). Data available online at <http://censtats.census.gov/bldg/bldgprmt.shtml>

Finally, after homes are completed they appear in tax assessor records. Tax assessor data provided by the Lane Council of Governments (LCOG) — spatially aligned with the District's attendance area boundaries — indicates that during the 12 years from 2000 to 2011, about 650 single family homes were built in the District. Table 9 categorizes these newer single family homes by jurisdiction and year built. The City of Junction City has accounted for 72 percent of the homes built since 2000. Homes that are demolished, removed, or replaced are not

subtracted from the number of new homes, so the *net* change in the District's housing stock is lower than the number of new homes.

Table 9
Single Family Homes Built Within JCSD by Jurisdiction
2000 to 2011

Jurisdiction	Year Built				2000 to 2011 Total
	2000 to 2002	2003 to 2005	2006 to 2008	2009 to 2011	
<i>City of Junction City</i>	48	41	138	104	331
<i>City of Eugene</i>	48	87	24	0	159
<i>Unincorporated Area</i>	41	44	48	21	154
District Total	137	172	210	127	646

Note: Does not include manufactured homes in parks.

Source: Data compiled by PRC, using geographic shape files and attribute data from LCOG, November 2012. Housing unit counts were determined by PSU-PRC using the "property class" and "stat class" fields in the taxlot attribute data.

ENROLLMENT TRENDS

Fall 2012 total K-12 enrollment of 1,678 was within 15 students, or one percent, of the District's total enrollment in each of the three previous years. District-wide enrollment is now 224 students (12 percent) lower than ten years ago in 2002-03, and 389 students (19 percent) lower than the peak 14 years ago, in the 1998-99 school year. The largest recent enrollment losses occurred after the 2006-07 and 2007-08 school years, upon the graduation of two relatively large high school classes. Since 2008-09 the District has experienced relatively stable K-12 enrollment, with a net gain of 36 students (2.2 percent) over the four year period.

Although all school levels (elementary, middle, and high) have lost enrollment in the past decade, the biggest losses have been in middle (6th-8th) and high school (9th-12th) grades. This reflects the relatively large cohort born during the "echo" of the baby boom in the late 1980s and early 1990s. They graduated from high school in the early to mid-2000s, as smaller primary grade cohorts entered the District's schools. That trend is now played out. Since 2008-09, high school enrollment has been relatively stable, in the range of 529 to 538 students for five consecutive years.

Table 10 summarizes the enrollment history for the District by grade level annually from 2002-03 to 2012-13.

Table 10
Junction City School District, Enrollment History, 2002-03 to 2012-13

Grade	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
K	118	137	138	118	119	114	108	129	114	108	134
1	124	124	144	137	123	114	120	117	118	123	113
2	135	129	126	160	143	125	109	127	124	128	124
3	140	128	136	117	159	135	126	121	120	120	128
4	125	134	131	138	120	142	137	128	127	130	127
5	136	124	146	148	140	117	143	123	136	124	135
6	135	130	120	135	138	128	117	145	129	133	120
7	173	141	134	121	147	130	120	113	151	138	136
8	169	185	136	141	119	135	127	131	118	157	131
9	180	167	184	141	154	121	137	137	150	129	162
10	151	168	169	184	139	167	126	137	132	141	122
11	175	133	146	167	169	135	150	115	131	132	138
12	141	166	124	140	165	169	123	141	125	127	108
Total	1,902	1,866	1,834	1,847	1,835	1,731	1,642	1,663	1,674	1,690	1,678
Annual change		-36	-32	13	-12	-105	-89	21	11	17	-12
		-1.9%	-1.7%	0.7%	-0.6%	-5.7%	-5.1%	1.3%	0.6%	1.0%	-0.7%
K-5	778	776	821	818	804	747	743	745	739	733	761
6-8	477	456	390	397	404	393	364	389	398	428	387
9-12	647	634	623	632	627	591	536	530	538	529	530

	2002-03 to 2007-08		2007-08 to 2012-13		2002-03 to 2012-13	
	5 yr. chg.	Pct.	5 yr. chg.	Pct.	10 yr. chg.	Pct.
K-5	-31	-4%	14	2%	-17	-2%
6-8	-84	-18%	-6	-2%	-90	-19%
9-12	-57	-9%	-61	-10%	-117	-18%
Total	-172	-9%	-53	-3%	-224	-12%

Source: Junction City School District.

Private School Enrollment, Home Schooling, and Inter-district Transfers

There are currently no private schools operating within Junction City. The nearest private schools are in Eugene and Harrisburg. In 2000 the Census “long form” estimate was that about 100 students in grade K-12, or just over four percent of all K-12 students, attended private schools in 2000. The latest estimates, from the Census Bureau’s 2007-2011 American Community Survey (ACS), show over 200 private school students, more than 11 percent of all students. However, the ACS sample size is smaller than the census and there is a seven percent margin of error at the 90 percent confidence level.⁶

Another difference between public school enrollment and total school age population can be attributed to home schooling. Home schooled students age 7 to 18 living in the District are required to register with the Lane Educational Service District (LESD), though the statistics kept by the LESD are not precise because students who move out of the area are not required to drop their registration. Students who enroll in public schools after being registered as home schooled are dropped from the home school registry. As shown in Table 11, the number of registered home school students has remained fairly stable over the past several years. The most recent number, 74, represents about four percent of the JCSD’s school age population.

Table 11	
Home School Students Residing in Junction City S.D.¹	
	Total
2006-07	96
2007-08	70
2008-09	71
2009-10	91
2010-11	71
2011-12	80
2012-13 ²	74
<i>1. Residents of ASD age 7-18 enrolled with Lane Education Service District.</i>	
<i>2. Preliminary.</i>	
<i>Source: Lane Education Service District, November 2012.</i>	

⁶ U.S. Census Bureau, 2000 Census, Summary File 3, Table P36; U.S. Census Bureau 2007-2011 American Community Survey 5 year estimates, Table B14002, with additional calculations by PSU Population Research Center.

Private schools and home schooling help to explain the difference between the number of school-age children living in the District and the number attending District schools. Both represent “outflow” from the District. That is, children eligible but not attending District schools. The other “outflow” consists of District residents who attend public schools in other school districts. There is also a related “inflow” of residents from other districts.

Under Oregon’s long established inter-district transfer rules, students who want to attend a public school outside of their resident district must gain approval from their home district and the district that they want to attend, and that approval must be renewed each year. Beginning in the 2012-13 school year, a new open enrollment policy allowed students to transfer without approval of their home district to a district that has designated spaces for students under the policy. Neither policy has had a significant impact on JCSD’s enrollment at this time. In both 2011-12 and 2012-13 the number of JCSD residents leaving to attend schools in other districts was roughly equal to the number of non-residents transferring into JCSD.

ENROLLMENT AND HOUSING

For school districts experiencing growth in their housing stock, understanding the existing demographics of the district is not enough. The impact of new residential development on school enrollment is often a concern of community members and school officials. New housing generally contributes enrollment growth to local schools, but demographic trends in existing homes may either offset or accelerate the enrollment gains from new housing. Also, the impacts vary by the characteristics of the new housing. In this section, we present estimates of student generation for different types of housing in the JCSD. These estimates help to inform the enrollment forecasts, and they can be used by District staff on an *ad hoc* basis to estimate potential student generation from future developments as they are proposed or approved.

We combined spatial data from LCOG accounting for all of the district's housing units by type with student address points in order to quantify the average number of students per unit for different types of housing. The figures in Table 12 show that multiple family homes, mostly consisting of rental apartments within the City of Junction City, are home to more elementary school children and fewer secondary school children, on average, than single family homes.

The District's average of 0.32, or one K-12 student for every three single family homes, is relatively low. However, Table 13 shows that there is nearly one JCSD student for every two newer homes within the City of Junction City. Elementary-age children are most likely to reside in the newest single family homes, while older children are more likely to reside in homes built in the 1990s. This follows the pattern of nearly every school district for which we have measured student generation rates.

An exception to the higher average number of JCSD students in newer housing is found in the southeastern portion of the District within the City of Eugene. Only 13 JCSD students live in those 169 homes, yet nearly all of the homes have been built since 2000. Are these low rates due to the greater distance to JCSD schools and families making other school choices? That may be one factor, but 2010 Census data confirms that there are relatively few children living in these homes. Among the 399 residents in the area, only 33 children between age 5 and 17 were counted in the census. This eight percent share of school age children is in contrast to the City

of Junction City's 18 percent share. Put another way, for every five homes in either area, there is one school-age child in the Eugene portion, and more than two school-age children within the City of Junction City.

Fall 2012 student generation rates for the City of Junction City are shown in Chart 2, illustrating the "aging in place" that occurs in single family homes. The newest homes have many more young children than homes that are more than 12 years old. As the children grow, homes built in the 2000s will soon have fewer elementary age children, much like the homes built before 2000. Although younger families may eventually occupy the older homes, owner-occupied homes turn over to new owners very gradually, and the new owners will represent a diverse mix of households that may not include as many families with children as the newer tract homes.

Table 12
Average Number of JCSD Students per Housing Unit
By Housing Unit Type, Fall 2012

	Grade Level			
	K-5	6-8	9-12	K-12
Single Family Homes*	0.14	0.08	0.11	0.32
Multiple Family Homes	0.21	0.07	0.09	0.37
Manufactured or Mobile Homes in Parks	0.09	0.04	0.07	0.21

**Note: Includes manufactured homes on individual taxlots.*

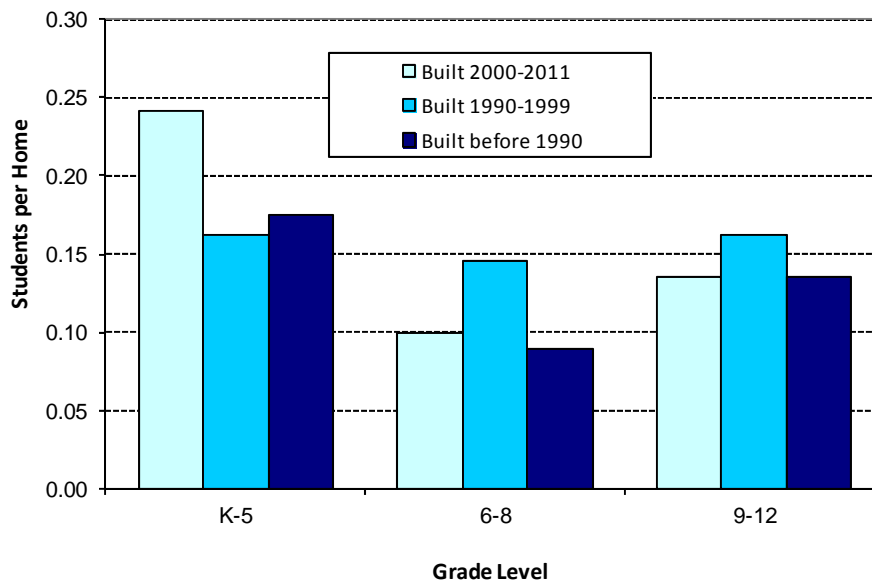
Source: Data compiled by PSU-PRC, using geographic shape files and attribute data from LCOG, RLID, November, 2012. Housing unit counts were determined by PSU-PRC using the "property class" and "stat class" fields in the taxlot attribute data and address points from LCOG.

Table 13
Average Number of JCSD Students per Housing Unit, Fall 2012
Single Family Homes by Jurisdiction

	Grade Level			
	K-5	6-8	9-12	K-12
District Total	0.14	0.08	0.11	0.32
City of Junction City	0.19	0.10	0.14	0.43
<i>Built 2000-2011</i>	<i>0.24</i>	<i>0.10</i>	<i>0.14</i>	<i>0.48</i>
<i>Built 1990-1999</i>	<i>0.16</i>	<i>0.15</i>	<i>0.16</i>	<i>0.47</i>
<i>Built before 1990</i>	<i>0.17</i>	<i>0.09</i>	<i>0.14</i>	<i>0.40</i>
City of Eugene (JCSD Portion)	0.02	0.02	0.04	0.08
Unincorporated Area	0.12	0.07	0.09	0.28

Source: Data compiled by PSU-PRC, using geographic shape files and attribute data from LCOG, RLID, November, 2012. Housing unit counts were determined by PSU-PRC using the "property class" and "stat class" fields in the taxlot attribute data and address points. Includes manufactured homes on individual taxlots.

Chart 2
JCSD Students per Single Family Home
City of Junction City, Fall 2012



ENROLLMENT FORECASTS

Forecast Methodology

To ensure that enrollment forecasts are consistent with the dynamics of likely population growth within the District, we combine a grade progression enrollment model with a demographic cohort-component model used to forecast population for the District by age and sex. The components of population change are births, deaths, and migration. Using age-specific fertility rates, age-sex specific mortality rates, age-sex specific migration rates, estimates of recent net migration levels, and forecasts of future migration levels, each component is applied to the base year population in a manner that simulates the actual dynamics of population change.

The 2000 and 2010 Census results are used as a baseline for the population forecasts. By “surviving” the 2000 population and 2000s births (estimating the population in each age group that would survive to the year 2010) and comparing the “survived” population to the actual 2010 population by age group, we are able to estimate the overall level of net migration between 2000 and 2010 as well as net migration by gender and age cohort. The net migration data were used to develop initial net migration rates, forming a baseline for rates used to forecast net migration for the 2010 to 2030 period.

We estimated the number of births to women residing within the District each year from 2000 to 2010, using data from the Oregon Health Authority, Center for Health Statistics. Detailed information including the age of mothers is incorporated in the establishment of fertility rates by age group for both 2000 and 2010. We adjusted the future fertility rates to reflect trends of increasing fertility rates for women age 30 and older and decreasing rates for women under 30. These trends are based on state and national observations, as well as the number of births by age of mother occurring within the District during the 2000 to 2010 period for which detailed birth data was available. In spite of the adjustments, the total fertility rate (TFR), an estimate of the number of children that would be born to the average woman during her child-bearing years based on age-specific fertility rates observed at a given time, remains at about 2.00 throughout the forecast, nearly identical to the TFRs in both 2000 and 2010.

Historic school enrollment is linked to the population forecast in two ways. First, the kindergarten and first grade enrollments at the time of the most recent census (the 2009-2010 school year) are compared to the population at the appropriate ages counted in the census. The “capture rate,” or ratio of enrollment to population, is an estimate of the share of area children who are enrolled in JCSD schools. Assumptions for capture rates based on census data are used to bring new kindergarten and first grade students into the District’s enrollment. Beginning in 2015-16 when the state plans to fund full-day kindergarten, the capture rate is 82 percent for kindergarten and 83 percent for first grade.

The other way that historic population and enrollment are linked is through migration. Annual changes in school enrollment by cohort closely follow trends in the net migration of children in the District’s population. Once the students are in first grade, a set of baseline rates are used to move students from one grade to the next. These rates, usually 1.00 for elementary grades, represent a scenario under which there is no change due to migration. Enrollment change beyond the baseline is added (or subtracted, if appropriate) at each grade level depending on the migration levels of the overall population by single years of age.

Residential Capacity and Development

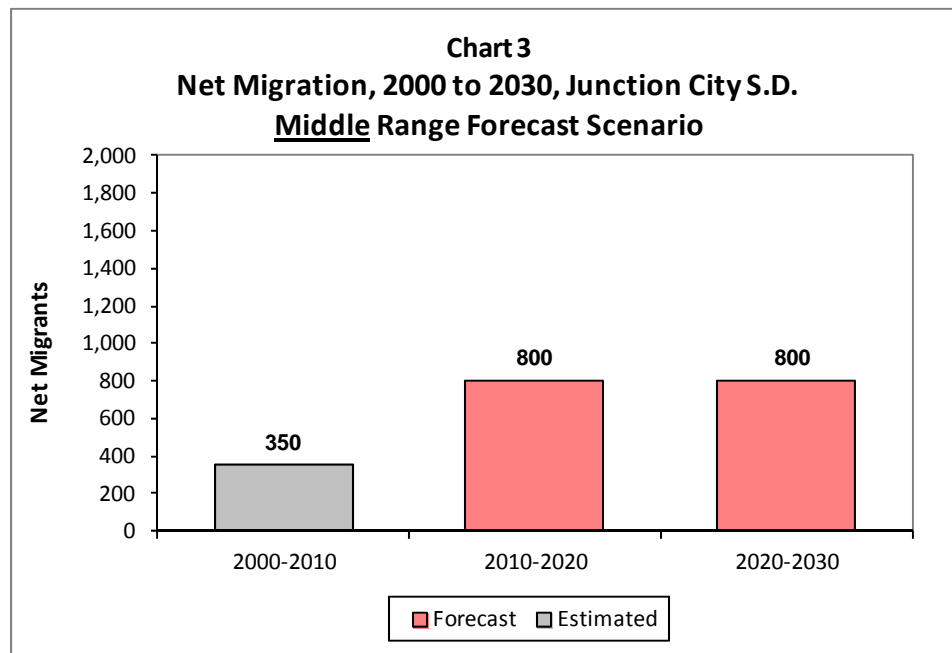
In June 2012 the City of Junction City updated its Comprehensive Plan, including a Residential Land Inventory and a Draft Housing Element. The plan indicated a need for 1,590 new dwelling units between 2011 and 2031, an average of 80 each year. Using a current inventory of buildable residential land adjusted for land needed for parks and rights-of-way, the plan concluded that there was enough land for needed low and high density residential development, and a 26 acre deficit in medium density residential land. The plan proposes to designate additional medium density residential land and expand the Urban Growth Boundary (UGB) to meet the need for housing, parks, and commercial land.⁷ Lane County Commissioners will review the amended Comprehensive Plan and proposed UGB expansion in February and March.

⁷ “Junction City Comprehensive Plan.” City of Junction City, June 2012.

Population Forecast

Census data confirm that population gains within the District in the 2000s occurred due to net migration (people moving in minus those moving out) and very small natural increase (births minus deaths).

By “surviving” the 2000 population and 2000s births (estimating the population in each age group that would survive to the year 2010) and comparing the “survived” population to actual



2010 population counts by age group, we are able to estimate net migration by age cohort. Under the MIDDLE range forecast, net migration is forecast to be somewhat higher than the 2000 to 2010 period. Chart 3 compares historic growth due to net migration estimated for the District with the MIDDLE range forecast net migration. Although net migration remains higher than in the past decade, population growth slows due to negative natural increase — more deaths than births — as the large baby boom population ages into higher mortality age ranges. Charts A1 and A2 in Appendix A illustrate the net migration assumptions under the LOW and HIGH scenarios.

Fertility rates are consistent across all three forecast scenarios, but the variance in migration levels results in different populations of women in childbearing ages, and therefore differences in the number of births. Births fall slightly from current levels under the LOW scenario, remain

stable under the MIDDLE scenario, and increase under the HIGH scenario. Table 14 shows historic births from 2000 to 2011 as well as forecasts from 2012 until 2017, the period that will have an impact on the enrollment forecasts presented in this study.

Table 14 Estimated and Forecast Births Junction City School District			
Year	Low Range	Middle Range	High Range
2000		133	
2001		139	
2002		133	
2003		122	
2004		120	
2005		105	
2006		135	
2007		164	
2008		101	
2009		113	
2010		137	
2011		132	
2012 (forecast)	129	130	133
2013 (forecast)	127	130	136
2014 (forecast)	128	131	139
2015 (forecast)	128	132	142
2016 (forecast)	127	131	143
2017 (forecast)	125	131	144

Source: 2000-2011 birth data from Oregon Center for Health Statistics allocated to JCSD boundary by PSU-PRC. 2012-2017 forecasts, PSU-PRC.

The 2030 MIDDLE range population forecast for the JCSD is 13,289, an increase of 1,071 persons from the 2010 Census. The MIDDLE range forecast is consistent with household growth that may occur due to the development of one or both state facilities envisioned in the 2007 forecast and 2009 Lane County Coordinated Population Forecasts prepared by PRC. However, the population forecast by age group shown in Table 15 that is linked to the school enrollment forecasts does not include the group quarters population that would be included in those facilities. The same is true for the HIGH range population forecast by age group shown in Appendix Table A2. The LOW range population forecast, detailed in Table A1, would be the most likely forecast if neither facility were built, if no other large scale economic development

were to occur in or near Junction City, and if the region's job market fails to recover, resulting in limited demand for new housing within the District.

School-age population (5 to 17) is forecast to increase slightly as a share of total population in the MIDDLE range forecast. However, the greatest numeric and percentage growth occurs at age 60 to 74 in 2020 and 70 to 84 in 2030, as the baby boom generation ages.

Table 15
Population by Age Group, Middle Range Forecast Scenario*
Junction City School District, 2000 to 2030

	2000 Census	2010 Census	2020 Forecast	2030 Forecast	2010 to 2030 Change	
					Number	Percent
Under Age 5	738	665	700	697	32	5%
Age 5 to 9	761	732	793	783	51	7%
Age 10 to 14	926	761	823	866	105	14%
Age 15 to 17	580	453	516	550	97	22%
Age 18 to 19	332	286	302	335	49	17%
Age 20 to 24	634	655	563	633	-22	-3%
Age 25 to 29	627	712	618	698	-14	-2%
Age 30 to 34	657	688	749	657	-31	-5%
Age 35 to 39	820	680	798	702	22	3%
Age 40 to 44	1,023	714	779	860	146	20%
Age 45 to 49	1,008	861	748	890	29	3%
Age 50 to 54	860	1,039	762	843	-196	-19%
Age 55 to 59	735	1,033	908	797	-236	-23%
Age 60 to 64	494	886	1,045	785	-101	-11%
Age 65 to 69	384	726	970	853	127	17%
Age 70 to 74	382	487	747	857	370	76%
Age 75 to 79	355	342	554	719	377	110%
Age 80 to 84	259	232	282	451	219	94%
Age 85 and over	234	266	235	312	46	17%
Total Population	11,809	12,218	12,892	13,289	1,071	9%
Total age 5 to 17	2,267	1,946	2,132	2,199	253	13%
share age 5 to 17	19.2%	15.9%	16.5%	16.6%		

	2000-2010	2010-2020	2020-2030
Population Change	409	674	397
Percent	3%	6%	3%
Average Annual	0.3%	0.5%	0.3%

**Note: The potential increase in group quarters (prison and mental hospital) population is not accounted for in these forecasts.*

Source: U.S. Census Bureau, 2000 and 2010 Censuses; data aggregated to JCSD boundary by Portland State University Population Research Center. PSU-PRC Forecasts, 2020 and 2030.

Growth rates calculated from the three JCSD forecast scenarios are compared with other forecasts in Table 16. Because a large share of the District's 2010 base population resides outside of the Junction City and Eugene UGBs, rates for the District are lower than those forecast for the City of Junction City. As described above, the JCSD forecasts do not include additional institutional group quarters population. Also, the capacity of the state facilities may be smaller than expected in PRC's 2009 city and county forecasts. For example, the proposed capacity of the State Hospital was 360 but is now 174. For comparability with the 2009 PRC forecasts, the "Junction City S.D. HIGH Plus GQ" growth rates include the District HIGH forecast plus the group quarters assumptions from the 2009 forecasts.

Table 16
Comparison of Population Growth Rates
Lane County, City of Junction City, and JCSD

Area	Average Annual Growth Rates		
	2000 to 2010 Historic	2010 to 2020 Forecast*	2020 to 2030 Forecast*
Lane County Low (PRC) ¹	0.9%	0.9%	0.7%
Lane County Medium (PRC) ¹	0.9%	1.0%	0.9%
Lane County High (PRC) ¹	0.9%	1.1%	1.0%
Lane County (OEA) ²	0.9%	0.7%	0.8%
City of Junction City ¹	1.3%	5.1%	2.0%
Unincorporated Lane County ¹	1.3%	-0.7%	-0.4%
Junction City S.D. LOW ³	0.3%	-0.1%	-0.4%
Junction City S.D. MIDDLE ³	0.3%	0.5%	0.3%
Junction City S.D. HIGH ³	0.3%	1.2%	0.9%
Junction City S.D. HIGH Plus GQ ³	0.3%	2.7%	0.8%

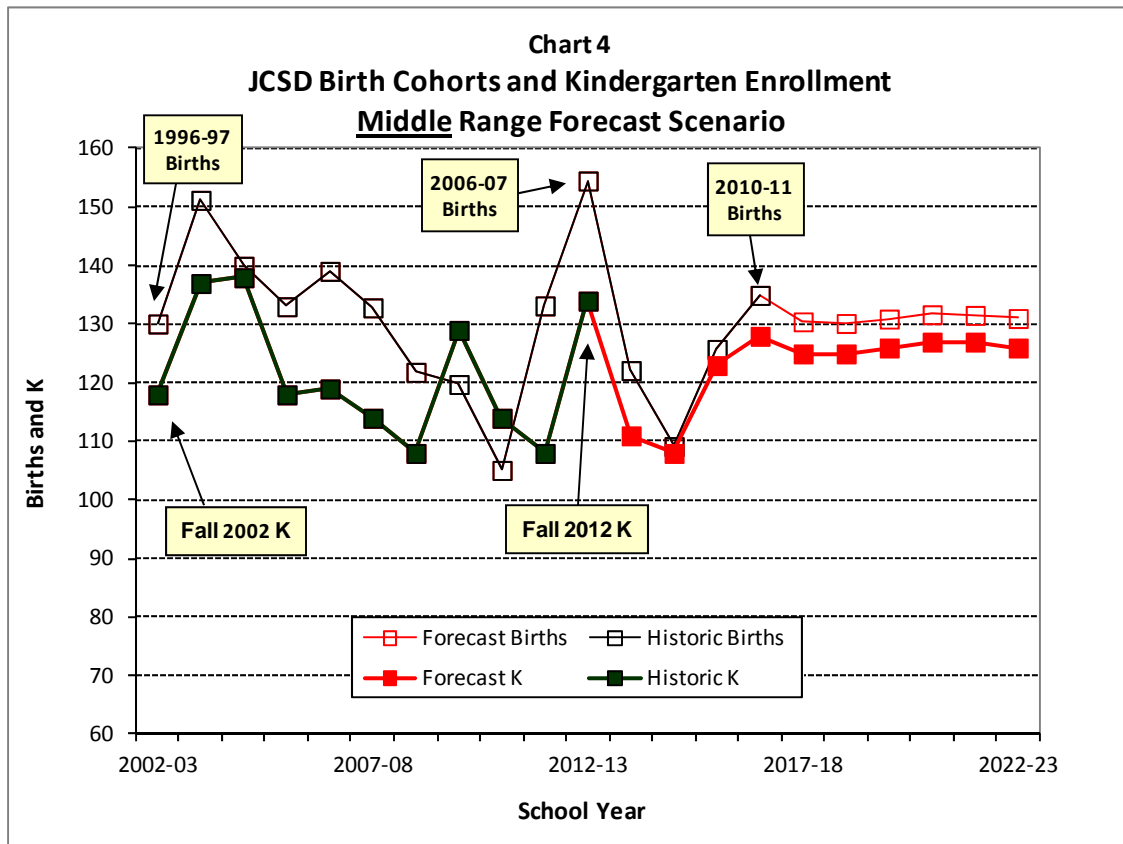
1. Census data, 2000, and 2010; growth rates for 2010 to 2030 from "Population Forecasts for Lane County, its Cities and Unincorporated Area 2008-2035." Portland State University Population Research Center, May 2009. Junction City's growth assumed that a 1,800-2,000 inmate prison and 360 bed State Hospital would be built by 2015. Unincorporated area forecasts are for the area outside of urban growth boundaries.

2. Census data, 2000, and 2010; growth rates for 2010 to 2030 from "Preliminary State and County Population Forecasts, 2015-2050 (Draft for review only)." Oregon Department of Administrative Services, Office of Economic Analysis, December, 2012.

3. Junction City School District Population Forecasts, PSU, Population Research Center, January 2013. Low, Middle, and High forecasts linked to the school enrollment forecast model do not include additional group quarters (GQ) population in prison and State Hospital. The HIGH Plus GQ forecast adds the GQ population from PRC's May 2009 Junction City forecast to the JCSD HIGH forecast.

District-wide Enrollment Forecast

Chart 4 compares the historic and forecast number of births in the District with the historic and forecast number of JCSD kindergarten students under the MIDDLE range scenario. Births correspond to kindergarten cohorts (September to August). Although many children move into and out of the District between birth and age five, and not all District residents attend JCSD kindergartens, kindergarten enrollment has roughly followed the trend in births five years earlier. Because the kindergarten capture rate is close to 82 percent, ratios of kindergarten enrollment to births that have consistently been above 0.82 indicate gains due to positive net migration. Throughout the MIDDLE range forecast, net migration between birth and age five contributes to the population of young children within the District. Similar charts for the LOW and HIGH range forecasts are presented as Charts A3 and A4 in Appendix A.



In the LOW range forecast total K-12 enrollment is relatively stable, remaining within 33 students (two percent) of present levels. Elementary (K-5th) enrollments account for most of the small loss over the 10 year forecast horizon. In the MIDDLE range forecast gradual enrollment

increases result in K-12 growth of 93 students (six percent) over the 10 year horizon, with all school levels experiencing similar growth rates. The HIGH range forecast of 1,950 K-12 students in 2022-23 is 272 students (16 percent) greater than current enrollment. The growth is predicated by in-migration of young families, with the largest growth occurring in 2017 and beyond. Therefore, elementary enrollments grow the fastest by 2022-23, gaining by 144 students (19 percent) over their 2012-13 levels. Table 17 summarizes the three district-wide forecast scenarios by school level (elementary, middle, and high). Appendix Tables A3, A4, and A5 contain detailed forecasts by grade level annually for the 10 year period.

Table 17
Junction City S.D., Enrollment Forecasts by School Level, 2013-14 to 2022-23

		<u>LOW</u> SERIES FORECAST						FORECAST CHANGE		
Grade	Actual 2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2022-23	2012-13 to 2017-18	2017-18 to 2022-23	2012-13 to 2022-23
K-5	761	742	731	730	734	743	738	-18	-5	-23
6-8	387	389	382	396	391	383	380	-4	-3	-7
9-12	530	538	535	534	521	522	527	-8	5	-3
Total	1,678	1,669	1,648	1,660	1,646	1,648	1,645	-30	-3	-33
<i>Annual change</i>		-9	-21	12	-14	2	-1			
		-0.5%	-1.3%	0.7%	-0.8%	0.1%	0.0%			

		<u>MIDDLE</u> SERIES FORECAST						FORECAST CHANGE		
Grade	Actual 2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2022-23	2012-13 to 2017-18	2017-18 to 2022-23	2012-13 to 2022-23
K-5	761	755	752	758	768	785	801	24	16	40
6-8	387	395	390	404	401	394	411	7	17	24
9-12	530	544	544	548	536	538	559	8	21	29
Total	1,678	1,694	1,686	1,710	1,705	1,717	1,771	39	54	93
<i>Annual change</i>		16	-8	24	-5	12	11			
		1.0%	-0.5%	1.4%	-0.3%	0.7%	0.6%			

		<u>HIGH</u> SERIES FORECAST						FORECAST CHANGE		
Grade	Actual 2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2022-23	2012-13 to 2017-18	2017-18 to 2022-23	2012-13 to 2022-23
K-5	761	766	770	779	791	815	905	54	90	144
6-8	387	399	395	411	409	404	444	17	40	57
9-12	530	549	554	560	549	556	601	26	45	71
Total	1,678	1,714	1,719	1,750	1,749	1,775	1,950	97	175	272
<i>Annual change</i>		36	5	31	-1	26	35			
		2.1%	0.3%	1.8%	-0.1%	1.5%	1.9%			

Population Research Center, Portland State University, January 2013.

FORECAST ACCURACY

The best way to measure potential forecast error is to compare actual enrollments with previous forecasts that were conducted using similar data and methodologies. A comparison of the forecasts prepared for the JCSD during the 2006-07 school year with actual enrollment in 2011-12 illustrates the advantages of preparing a range of high, medium, and low scenarios and monitoring actual economic and housing trends that may affect school enrollments.

At the time the forecasts were prepared, the housing market was booming, developers had recently submitted applications for several new residential subdivisions, and sites had been identified for a large state prison and a state mental hospital. Yet the report issued in February 2007 stated that:

“If an economic downturn dampens the demand for housing in Lane County, Junction City will be affected, and the housing growth may resemble the “LOW” scenario. Conversely, the “HIGH” scenario may develop if a prison or mental hospital is located on the designated site near Highway 99 and construction is fast-tracked.”⁸

Certainly the housing development did slow, and even the LOW scenario did not foresee the coming recession, or its toll on the area’s largest industry, motor coach production. Therefore, it is not surprising that the LOW scenario was the most accurate series at the end of the five year horizon, and that actual K-12 enrollment was about one percent lower than the LOW forecast. Table 18 compares actual JCSD enrollment by grade level in Fall 2011 with the 2011-12 forecasts prepared in February 2007. For the K-12 total and for each of the grades from 3rd through 12th, the LOW series was the most accurate. However, for grades Kindergarten through 2nd, the HIGH forecast was closest. This interesting result may reflect the fact that, unlike many cities in which housing development virtually ceased during and after the housing crisis, some homebuilding has continued in the city’s new subdivisions, and young families with children are occupying many of the new homes. As a measure of average error for individual grade levels, the mean absolute percent error (MAPE) is also included in the table.

⁸ “Junction City School District Enrollment Forecasts, 2007-08 to 2011-12.” Population Research Center, Portland State University. February 2007.

Table 18
Fall 2011 Enrollment Compared to LOW, MIDDLE, and HIGH Five Year Forecasts
By Grade Level

Grade	Actual	Low forecast ¹			MIDDLE forecast ¹			High forecast ¹		
		Fcst.	Diff.	Error	Fcst.	Diff.	Error	Fcst.	Diff.	Error
K	108	98	-10	-9.3%	106	-2	-1.9%	110	2	1.9%
1	123	111	-12	-9.8%	121	-2	-1.6%	123	0	0.0%
2	128	110	-18	-14.1%	121	-7	-5.5%	130	2	1.6%
3	120	129	9	7.5%	144	24	20.0%	154	34	28.3%
4	130	133	3	2.3%	150	20	15.4%	161	31	23.8%
5	124	139	15	12.1%	159	35	28.2%	171	47	37.9%
6	133	127	-6	-4.5%	143	10	7.5%	155	22	16.5%
7	138	148	10	7.2%	163	25	18.1%	178	40	29.0%
8	157	164	7	4.5%	181	24	15.3%	198	41	26.1%
9	129	127	-2	-1.6%	142	13	10.1%	155	26	20.2%
10	141	144	3	2.1%	158	17	12.1%	172	31	22.0%
11	132	139	7	5.3%	150	18	13.6%	164	32	24.2%
12	127	135	8	6.3%	145	18	14.2%	159	32	25.2%
Total	1,690	1,704	14	0.8%	1,883	193	11.4%	2,030	340	20.1%
MAPE⁴		6.7%			12.6%			19.7%		

1. Forecasts for 2011-12 by PSU-PRC, baseline 2006-07 enrollment, February 2007.

2. Mean absolute percent error for individual grades K-12.

APPENDIX A

POPULATION AND ENROLLMENT FORECASTS

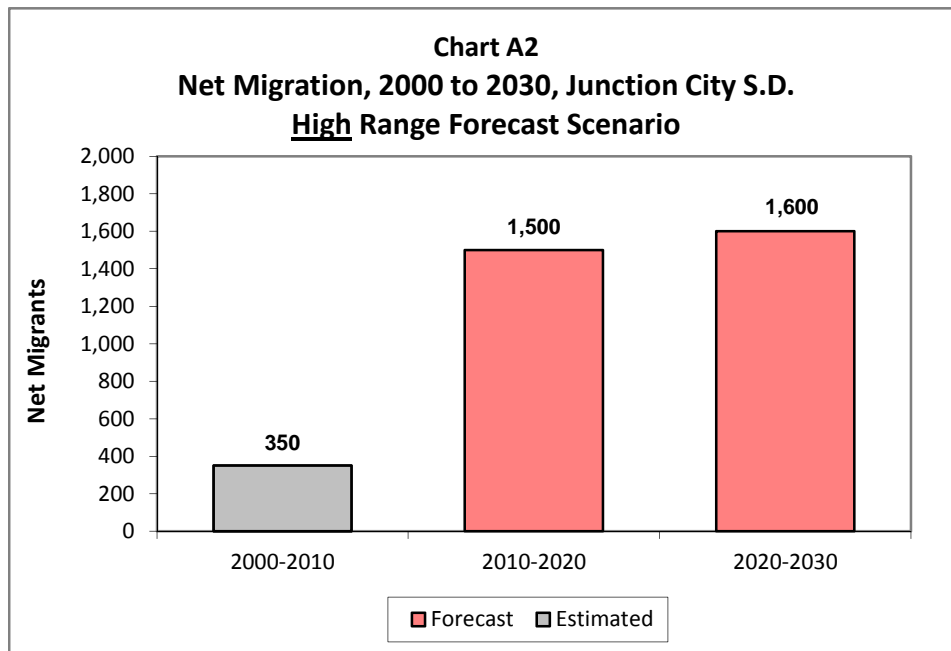
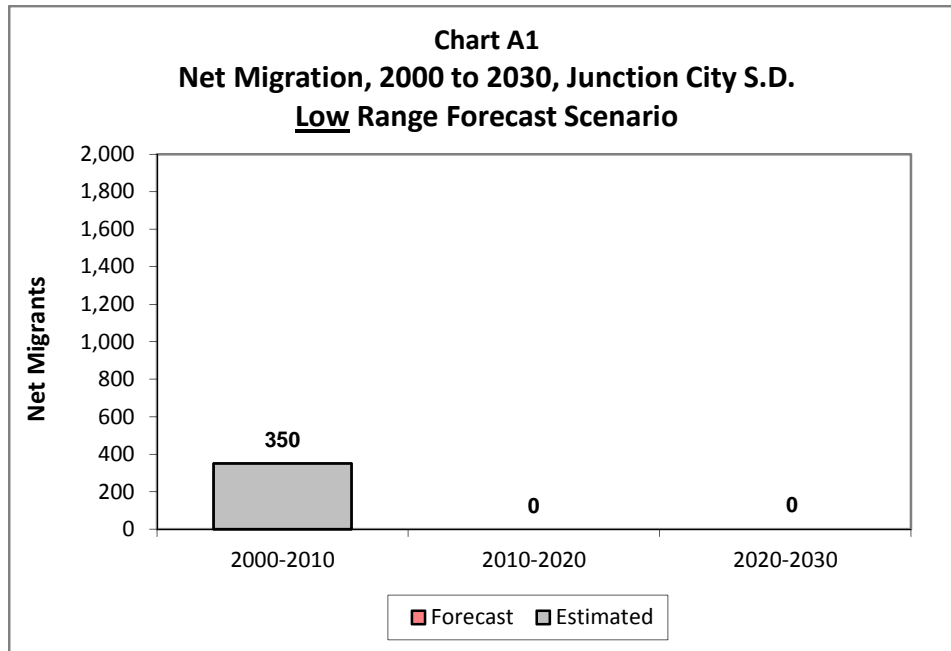


Table A1
Population by Age Group, Low Range Forecast Scenario
Junction City School District, 2000 to 2030

	2000 Census	2010 Census	2020 Forecast	2030 Forecast	2010 to 2030 Change	
					Number	Percent
Under Age 5	738	665	651	591	-74	-11%
Age 5 to 9	761	732	734	669	-63	-9%
Age 10 to 14	926	761	771	756	-5	-1%
Age 15 to 17	580	453	488	484	31	7%
Age 18 to 19	332	286	295	303	17	6%
Age 20 to 24	634	655	518	538	-117	-18%
Age 25 to 29	627	712	570	614	-98	-14%
Age 30 to 34	657	688	698	555	-133	-19%
Age 35 to 39	820	680	752	605	-75	-11%
Age 40 to 44	1,023	714	733	762	48	7%
Age 45 to 49	1,008	861	697	789	-72	-8%
Age 50 to 54	860	1,039	709	746	-293	-28%
Age 55 to 59	735	1,033	866	702	-331	-32%
Age 60 to 64	494	886	997	687	-199	-22%
Age 65 to 69	384	726	923	774	48	7%
Age 70 to 74	382	487	704	775	288	59%
Age 75 to 79	355	342	504	645	303	89%
Age 80 to 84	259	232	257	397	165	71%
Age 85 and over	234	266	209	252	-14	-5%
Total Population	11,809	12,218	12,076	11,644	-574	-5%
Total age 5 to 17	2,267	1,946	1,993	1,909	-37	-2%
share age 5 to 17	19.2%	15.9%	16.5%	16.4%		

	2000-2010	2010-2020	2020-2030
Population Change	409	-142	-433
<i>Percent</i>	3%	-1%	-4%
<i>Average Annual</i>	0.3%	-0.1%	-0.4%

Source: U.S. Census Bureau, 2000 and 2010 Censuses; data aggregated to JCSD boundary by Portland State University Population Research Center. PSU-PRC Forecasts, 2020 and 2030.

Table A2
Population by Age Group, High Range Forecast Scenario*
Junction City School District, 2000 to 2030

	2000 Census	2010 Census	2020 Forecast	2030 Forecast	2010 to 2030 Change	
					Number	Percent
Under Age 5	738	665	788	848	183	28%
Age 5 to 9	761	732	857	934	202	28%
Age 10 to 14	926	761	868	1,031	270	35%
Age 15 to 17	580	453	542	637	184	41%
Age 18 to 19	332	286	320	379	93	33%
Age 20 to 24	634	655	607	755	100	15%
Age 25 to 29	627	712	662	801	89	13%
Age 30 to 34	657	688	795	736	48	7%
Age 35 to 39	820	680	841	783	103	15%
Age 40 to 44	1,023	714	831	942	228	32%
Age 45 to 49	1,008	861	792	971	110	13%
Age 50 to 54	860	1,039	805	936	-103	-10%
Age 55 to 59	735	1,033	955	883	-150	-15%
Age 60 to 64	494	886	1,098	857	-29	-3%
Age 65 to 69	384	726	1,007	931	205	28%
Age 70 to 74	382	487	776	937	450	92%
Age 75 to 79	355	342	597	776	434	127%
Age 80 to 84	259	232	311	497	265	114%
Age 85 and over	234	266	271	375	109	41%
Total Population	11,809	12,218	13,723	15,009	2,791	23%
Total age 5 to 17	2,267	1,946	2,267	2,602	656	34%
share age 5 to 17	19.2%	15.9%	16.5%	17.3%		

	2000-2010	2010-2020	2020-2030
Population Change	409	1,505	1,286
Percent	3%	12%	9%
Average Annual	0.3%	1.2%	0.9%

**Note: The potential increase in group quarters (prison and mental hospital) population is not accounted for in these forecasts.*

Source: U.S. Census Bureau, 2000 and 2010 Censuses; data aggregated to JCSD boundary by Portland State University Population Research Center. PSU-PRC Forecasts, 2020 and 2030.

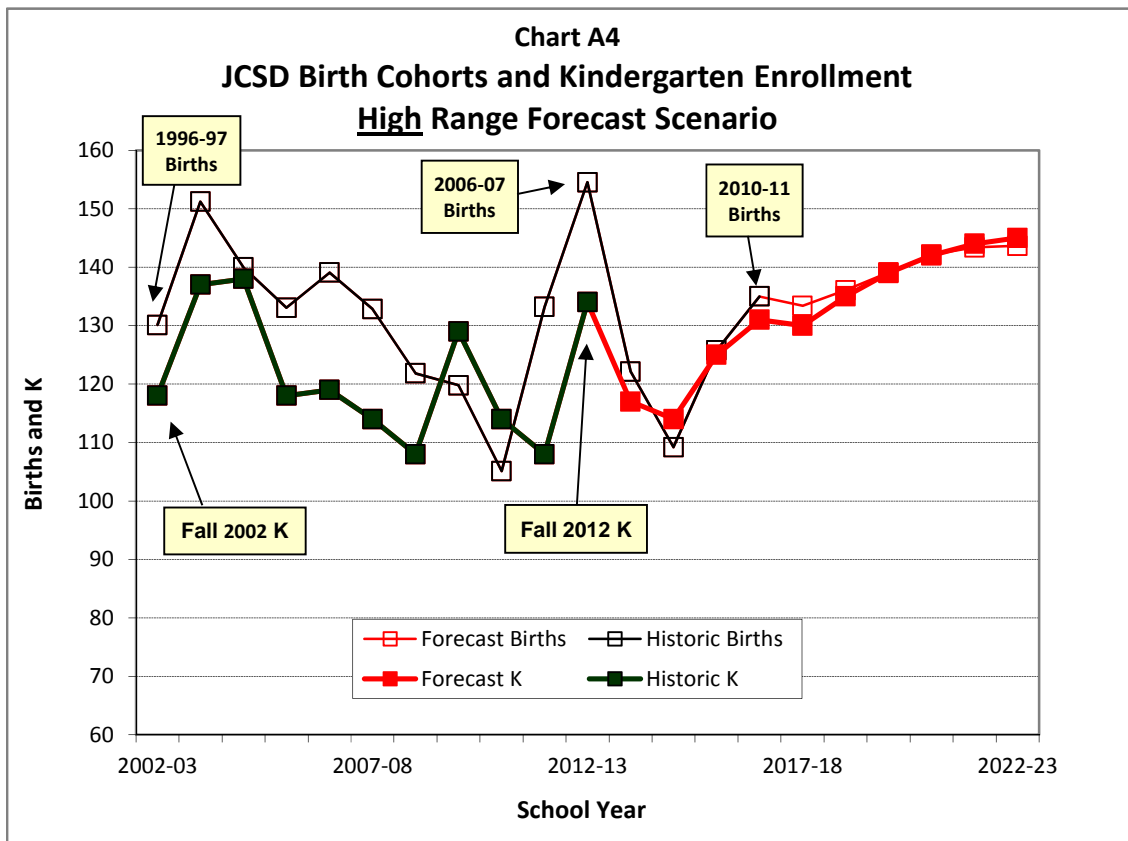
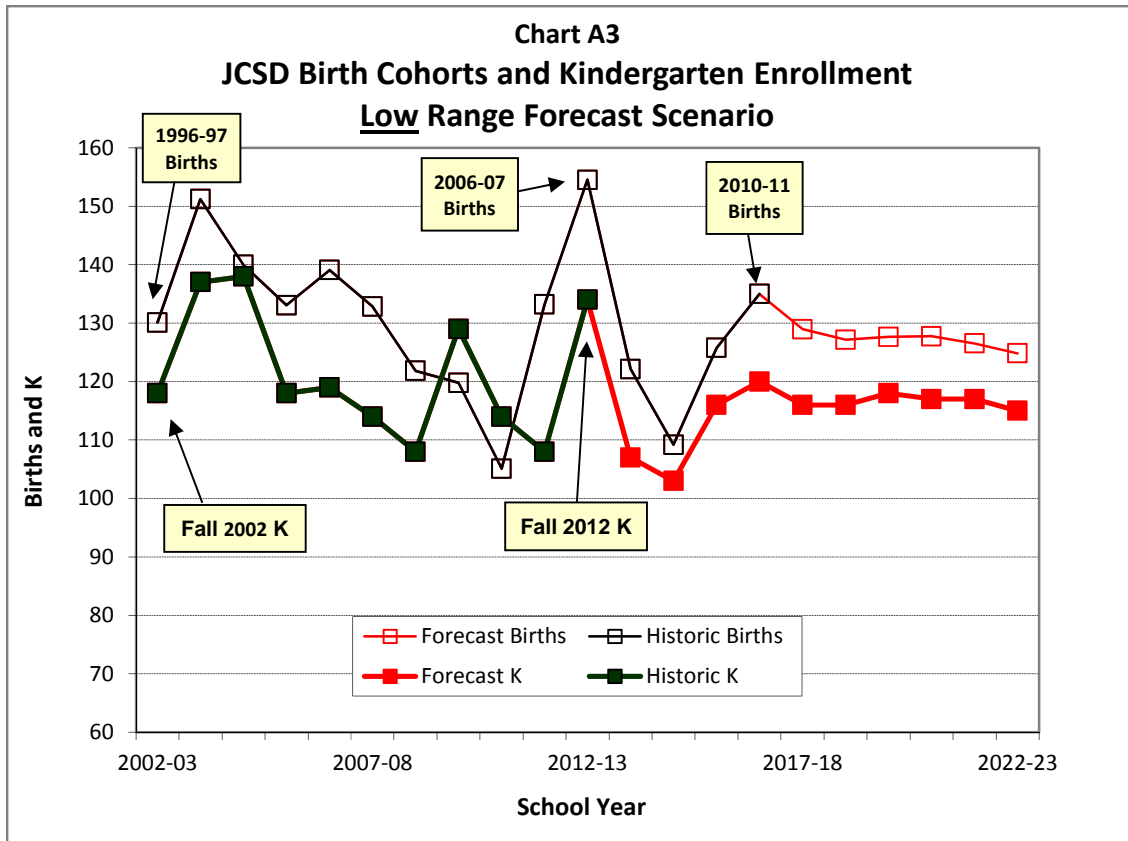


Table A3
Junction City S.D., Low Range Enrollment Forecasts, 2013-14 to 2022-23

Actual		Forecast									
Grade	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
K	134	107	103	116	120	116	116	118	117	117	115
1	113	141	112	109	120	123	119	120	121	121	120
2	124	113	143	114	111	122	125	121	122	123	123
3	128	124	114	145	116	113	124	127	123	124	125
4	127	130	127	117	148	119	116	127	130	126	127
5	135	127	132	129	119	150	121	118	129	132	128
6	120	133	126	131	128	118	149	120	117	128	131
7	136	120	135	128	133	130	120	151	121	118	130
8	131	136	121	137	130	135	132	122	153	122	119
9	162	138	144	128	145	138	143	140	129	162	129
10	122	156	133	139	124	140	134	138	135	125	157
11	138	116	149	127	133	119	134	128	132	129	120
12	108	128	109	140	119	125	112	126	120	124	121
Total	1,678	1,669	1,648	1,660	1,646	1,648	1,645	1,656	1,649	1,651	1,645
Annual change		-9	-21	12	-14	2	-3	11	-7	2	-6
		-0.5%	-1.3%	0.7%	-0.8%	0.1%	-0.2%	0.7%	-0.4%	0.1%	-0.4%
K-5	761	742	731	730	734	743	721	731	742	743	738
6-8	387	389	382	396	391	383	401	393	391	368	380
9-12	530	538	535	534	521	522	523	532	516	540	527

	2012-13 to 2017-18		2017-18 to 2022-23		2017-18 to 2022-23	
	5 yr. chg.	Pct.	5 yr. chg.	Pct.	10 yr. chg.	Pct.
K-5	-18	-2%	-5	-1%	-23	-3%
6-8	-4	-1%	-3	-1%	-7	-2%
9-12	-8	-2%	5	1%	-3	-1%
Total	-30	-2%	-3	0%	-33	-2%

Population Research Center, Portland State University, January 2013.

Table A4
Junction City S.D., Middle Range Enrollment Forecasts, 2013-14 to 2022-23

Actual		Forecast									
Grade	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
K	134	111	108	123	128	125	125	126	127	127	126
1	113	142	118	115	127	132	129	130	130	131	131
2	124	115	145	120	117	129	134	131	132	132	133
3	128	126	117	148	122	119	131	137	133	134	134
4	127	132	130	120	152	125	122	135	141	137	138
5	135	129	134	132	122	155	127	124	137	144	139
6	120	135	129	134	132	122	155	127	124	137	144
7	136	122	137	131	136	134	124	158	129	126	139
8	131	138	124	139	133	138	136	126	161	131	128
9	162	140	147	132	148	142	147	145	134	171	140
10	122	157	136	143	128	144	138	143	141	130	166
11	138	117	151	131	137	123	138	133	137	136	125
12	108	130	110	142	123	129	116	130	125	129	128
Total	1,678	1,694	1,686	1,710	1,705	1,717	1,722	1,745	1,751	1,765	1,771
Annual change		16	-8	24	-5	12	5	23	6	14	6
		1.0%	-0.5%	1.4%	-0.3%	0.7%	0.3%	1.3%	0.3%	0.8%	0.3%
K-5	761	755	752	758	768	785	768	783	800	805	801
6-8	387	395	390	404	401	394	415	411	414	394	411
9-12	530	544	544	548	536	538	539	551	537	566	559

	2012-13 to 2017-18		2017-18 to 2022-23		2017-18 to 2022-23	
	5 yr. chg.	Pct.	5 yr. chg.	Pct.	10 yr. chg.	Pct.
K-5	24	3%	16	2%	40	5%
6-8	7	2%	17	4%	24	6%
9-12	8	2%	21	4%	29	5%
Total	39	2%	54	3%	93	6%

Population Research Center, Portland State University, January 2013.

Table A5
Junction City S.D., High Range Enrollment Forecasts, 2013-14 to 2022-23

Actual		Forecast									
Grade	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
K	134	117	114	125	131	130	135	139	142	144	145
1	113	143	124	121	130	136	137	141	144	148	150
2	124	116	146	127	123	133	140	141	144	148	152
3	128	127	119	149	129	126	137	144	144	148	152
4	127	133	131	123	153	133	131	143	149	149	153
5	135	130	136	134	125	157	137	135	146	153	153
6	120	136	130	136	134	125	159	138	135	146	154
7	136	123	139	133	139	137	129	164	141	138	149
8	131	140	126	142	136	142	141	133	168	144	141
9	162	141	150	135	152	146	153	152	143	180	154
10	122	159	138	146	131	149	144	150	149	140	176
11	138	118	154	133	141	127	145	140	145	144	135
12	108	131	112	146	125	134	121	138	133	137	136
Total	1,678	1,714	1,719	1,750	1,749	1,775	1,809	1,858	1,883	1,919	1,950
Annual change		36	5	31	-1	26	34	49	25	36	31
		2.1%	0.3%	1.8%	-0.1%	1.5%	1.9%	2.7%	1.3%	1.9%	1.6%
K-5	761	766	770	779	791	815	817	843	869	890	905
6-8	387	399	395	411	409	404	429	435	444	428	444
9-12	530	549	554	560	549	556	563	580	570	601	601

	2012-13 to 2017-18		2017-18 to 2022-23		2017-18 to 2022-23	
	5 yr. chg.	Pct.	5 yr. chg.	Pct.	10 yr. chg.	Pct.
K-5	54	7%	90	11%	144	19%
6-8	17	4%	40	10%	57	15%
9-12	26	5%	45	8%	71	13%
Total	97	6%	175	10%	272	16%

Population Research Center, Portland State University, January 2013.

APPENDIX B

2000 and 2010 CENSUS PROFILE

2000 and 2010 Census Profile

Junction City School District, Oregon

Approximation based on census blocks

POPULATION	2000		2010		Change	
SEX AND AGE						
Total population	11,809	100.0%	12,218	100.0%	409	3.5%
Under 5 years	738	6.2%	665	5.4%	-73	-9.9%
5 to 9 years	761	6.4%	732	6.0%	-29	-3.8%
10 to 14 years	926	7.8%	761	6.2%	-165	-17.8%
15 to 19 years	912	7.7%	739	6.0%	-173	-19.0%
20 to 24 years	634	5.4%	655	5.4%	21	3.3%
25 to 29 years	627	5.3%	712	5.8%	85	13.6%
30 to 34 years	657	5.6%	688	5.6%	31	4.7%
35 to 39 years	820	6.9%	680	5.6%	-140	-17.1%
40 to 44 years	1,023	8.7%	714	5.8%	-309	-30.2%
45 to 49 years	1,008	8.5%	861	7.0%	-147	-14.6%
50 to 54 years	860	7.3%	1,039	8.5%	179	20.8%
55 to 59 years	735	6.2%	1,033	8.5%	298	40.5%
60 to 64 years	494	4.2%	886	7.3%	392	79.4%
65 to 69 years	384	3.3%	726	5.9%	342	89.1%
70 to 74 years	382	3.2%	487	4.0%	105	27.5%
75 to 79 years	355	3.0%	342	2.8%	-13	-3.7%
80 to 84 years	259	2.2%	232	1.9%	-27	-10.4%
85 years and over	234	2.0%	266	2.2%	32	13.7%
Median age (years)	39.0		43.3		4.3	
Under 18 years	3,005	25.4%	2,611	21.4%	-394	-13.1%
18 to 64 years	7,190	60.9%	7,554	61.8%	364	5.1%
65 years and over	1,614	13.7%	2,053	16.8%	439	27.2%
Male population	5,862	100.0%	6,060	100.0%	198	3.4%
Under 5 years	366	6.2%	350	5.8%	-16	-4.4%
5 to 9 years	399	6.8%	355	5.9%	-44	-11.0%
10 to 14 years	452	7.7%	383	6.3%	-69	-15.3%
15 to 19 years	504	8.6%	387	6.4%	-117	-23.2%
20 to 24 years	321	5.5%	349	5.8%	28	8.7%
25 to 29 years	325	5.5%	351	5.8%	26	8.0%
30 to 34 years	339	5.8%	346	5.7%	7	2.1%
35 to 39 years	380	6.5%	341	5.6%	-39	-10.3%
40 to 44 years	497	8.5%	369	6.1%	-128	-25.8%
45 to 49 years	515	8.8%	398	6.6%	-117	-22.7%
50 to 54 years	453	7.7%	523	8.6%	70	15.5%
55 to 59 years	361	6.2%	494	8.2%	133	36.8%
60 to 64 years	270	4.6%	459	7.6%	189	70.0%
65 to 69 years	186	3.2%	372	6.1%	186	100.0%
70 to 74 years	171	2.9%	244	4.0%	73	42.7%
75 to 79 years	155	2.6%	158	2.6%	3	1.9%
80 to 84 years	102	1.7%	97	1.6%	-5	-4.9%
85 years and over	66	1.1%	84	1.4%	18	27.3%

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.

Tabulated by Population Research Center, Portland State University.

www.pdx.edu/prc

2000 and 2010 Census Profile

Junction City School District, Oregon

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
Male population (continued)						
Median age (years)	38.0		42.3		4.3	
Under 18 years	1,536	26.2%	1,325	21.9%	-211	-13.7%
18 to 64 years	3,646	62.2%	3,780	62.4%	134	3.7%
65 years and over	680	11.6%	955	15.8%	275	40.4%
Female population	5,947	100.0%	6,158	100.0%	211	3.5%
Under 5 years	372	6.3%	315	5.1%	-57	-15.3%
5 to 9 years	362	6.1%	377	6.1%	15	4.1%
10 to 14 years	474	8.0%	378	6.1%	-96	-20.3%
15 to 19 years	408	6.9%	352	5.7%	-56	-13.7%
20 to 24 years	313	5.3%	306	5.0%	-7	-2.2%
25 to 29 years	302	5.1%	361	5.9%	59	19.5%
30 to 34 years	318	5.3%	342	5.6%	24	7.5%
35 to 39 years	440	7.4%	339	5.5%	-101	-23.0%
40 to 44 years	526	8.8%	345	5.6%	-181	-34.4%
45 to 49 years	493	8.3%	463	7.5%	-30	-6.1%
50 to 54 years	407	6.8%	516	8.4%	109	26.8%
55 to 59 years	374	6.3%	539	8.8%	165	44.1%
60 to 64 years	224	3.8%	427	6.9%	203	90.6%
65 to 69 years	198	3.3%	354	5.7%	156	78.8%
70 to 74 years	211	3.5%	243	3.9%	32	15.2%
75 to 79 years	200	3.4%	184	3.0%	-16	-8.0%
80 to 84 years	157	2.6%	135	2.2%	-22	-14.0%
85 years and over	168	2.8%	182	3.0%	14	8.3%
Median age (years)	39.8		44.5		4.7	
Under 18 years	1,469	24.7%	1,286	20.9%	-183	-12.5%
18 to 64 years	3,544	59.6%	3,774	61.3%	230	6.5%
65 years and over	934	15.7%	1,098	17.8%	164	17.6%

AREA AND DENSITY

Land Area - Acres ¹	104,091		104,026			
Persons per acre	0.1		0.1		0.0	3.5%
Persons per square mile	73		75		3	3.5%

RACE

Total population	11,809	100.0%	12,218	100.0%	409	3.5%
White alone	10,980	93.0%	11,216	91.8%	236	2.1%
Black or African American alone	37	0.3%	61	0.5%	24	64.9%
American Indian and Alaska Native alone	130	1.1%	137	1.1%	7	5.4%
Asian alone	77	0.7%	71	0.6%	-6	-7.8%
Native Hawaiian and Other Pacific Islander alone	12	0.1%	18	0.1%	6	50.0%
Some Other Race alone	264	2.2%	356	2.9%	92	34.8%
Two or More Races	309	2.6%	359	2.9%	50	16.2%

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.

Tabulated by Population Research Center, Portland State University.

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2000 and 2010 Census Profile

Junction City School District, Oregon

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
RACE (continued)						
Race alone or in combination with one or more other races ²						
White	11,273	95.5%	11,559	94.6%	286	2.5%
Black or African American	62	0.5%	109	0.9%	47	75.8%
American Indian and Alaska Native	285	2.4%	371	3.0%	86	30.2%
Asian	126	1.1%	125	1.0%	-1	-0.8%
Native Hawaiian and Other Pacific Islander	32	0.3%	40	0.3%	8	25.0%
Some Other Race	359	3.0%	406	3.3%	47	13.1%

HISPANIC OR LATINO AND RACE

Total population	11,809	100.0%	12,218	100.0%	409	3.5%
Hispanic or Latino	606	5.1%	851	7.0%	245	40.4%
Not Hispanic or Latino	11,203	94.9%	11,367	93.0%	164	1.5%
White alone	10,707	90.7%	10,806	88.4%	99	0.9%
Black or African American alone	37	0.3%	57	0.5%	20	54.1%
American Indian and Alaska Native alone	122	1.0%	119	1.0%	-3	-2.5%
Asian alone	67	0.6%	70	0.6%	3	4.5%
Native Hawaiian and Other Pacific Islander alone	11	0.1%	18	0.1%	7	63.6%
Some Other Race alone	8	0.1%	15	0.1%	7	87.5%
Two or More Races	251	2.1%	282	2.3%	31	12.4%

RELATIONSHIP

Total population	11,809	100.0%	12,218	100.0%	409	3.5%
In households	11,666	98.8%	12,125	99.2%	459	3.9%
In family households	10,033	85.0%	10,139	83.0%	106	1.1%
Householder	3,201	27.1%	3,363	27.5%	162	5.1%
Spouse ³	2,653	22.5%	2,657	21.7%	4	0.2%
Child	3,395	28.7%	3,046	24.9%	-349	-10.3%
Own child under 18 years	2,720	23.0%	2,270	18.6%	-450	-16.5%
Other relatives	487	4.1%	653	5.3%	166	34.1%
Nonrelatives	297	2.5%	420	3.4%	123	41.4%
In nonfamily households	1,633	13.8%	1,986	16.3%	353	21.6%
Householder	1,293	10.9%	1,540	12.6%	247	19.1%
Nonrelatives	340	2.9%	446	3.7%	106	31.2%
Population under 18 in households	2,998	99.8%	2,608	99.9%	-390	-13.0%
Population 18 to 64 in households	7,129	99.2%	7,521	99.6%	392	5.5%
Population 65 and over in households	1,539	95.4%	1,996	97.2%	457	29.7%
In group quarters	143	1.2%	93	0.8%	-50	-35.0%

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.

Tabulated by Population Research Center, Portland State University.

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2000 and 2010 Census Profile

Junction City School District, Oregon

Approximation based on census blocks

POPULATION (continued)	2000		2010		Change	
GROUP QUARTERS						
Total group quarters population	143	100.0%	93	100.0%	-50	-35.0%
Institutionalized population	67	46.9%	80	86.0%	13	19.4%
Male	32	22.4%	45	48.4%	13	40.6%
Female	35	24.5%	35	37.6%	0	0.0%
Noninstitutionalized population	76	53.1%	13	14.0%	-63	-82.9%
Male	43	30.1%	3	3.2%	-40	-93.0%
Female	33	23.1%	10	10.8%	-23	-69.7%
Population under 18 in group quarters	7	0.2%	3	0.1%	-4	-57.1%
Population 18 to 64 in group quarters	61	0.8%	33	0.4%	-28	-45.9%
Population 65 and over in group quarters	75	4.6%	57	2.8%	-18	-24.0%
HOUSEHOLDS	2000		2010		Change	
Total households	4,494	100.0%	4,903	100.0%	409	9.1%
Family households (families) ⁴	3,201	71.2%	3,363	68.6%	162	5.1%
With own children under 18 years	1,450	32.3%	1,228	25.0%	-222	-15.3%
Husband-wife family	2,653	59.0%	2,657	54.2%	4	0.2%
With own children under 18 years	1,111	24.7%	862	17.6%	-249	-22.4%
Male householder, no wife present	170	3.8%	246	5.0%	76	44.7%
With own children under 18 years	104	2.3%	128	2.6%	24	23.1%
Female householder, no husband present	378	8.4%	460	9.4%	82	21.7%
With own children under 18 years	235	5.2%	238	4.9%	3	1.3%
Nonfamily households ⁴	1,293	28.8%	1,540	31.4%	247	19.1%
Householder living alone	1,023	22.8%	1,190	24.3%	167	16.3%
Male	456	10.1%	563	11.5%	107	23.5%
65 years and over	111	2.5%	165	3.4%	54	48.6%
Female	567	12.6%	627	12.8%	60	10.6%
65 years and over	348	7.7%	352	7.2%	4	1.1%
Households with individuals under 18 years	1,572	35.0%	1,381	28.2%	-191	-12.2%
Households with individuals 65 years and over	1,137	25.3%	1,462	29.8%	325	28.6%
Average household size	2.60		2.47		-0.12	-4.7%
Average family size ⁴	3.04		2.89		-0.15	-5.0%

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.

Tabulated by Population Research Center, Portland State University.

www.pdx.edu/prc

2000 and 2010 Census Profile

Junction City School District, Oregon

Approximation based on census blocks

HOUSING UNITS	2000		2010		Change	
Total housing units	4,731	100.0%	5,214	100.0%	483	10.2%
Occupied housing units	4,494	95.0%	4,903	94.0%	409	9.1%
Owner occupied ⁵	3,132	69.7%	3,364	68.6%	232	7.4%
Owned with a mortgage or a loan	N/A		2,279	67.7%		
Owned free and clear	N/A		1,085	32.3%		
Renter occupied	1,362	30.3%	1,539	31.4%	177	13.0%
Vacant housing units ⁶	237	5.0%	311	6.0%	74	31.2%
For rent	71	30.0%	89	28.6%	18	25.4%
For sale only	46	19.4%	50	16.1%	4	8.7%
Rented or sold, not occupied	9	3.8%	19	6.1%	10	111.1%
For seasonal, recreational, or occasional use	29	12.2%	51	16.4%	22	75.9%
For migrant workers	0	0.0%	1	0.3%	1	--
All other vacants	82	34.6%	101	32.5%	19	23.2%
Owner-occupied housing units	3,132	69.7%	3,364	68.6%	232	7.4%
Population in owner-occupied housing units	8,404		8,371		-33	-0.4%
Average household size of owner-occupied units	2.68		2.49		-0.19	-7.1%
Renter-occupied housing units	1,362	30.3%	1,539	31.4%	177	13.0%
Population in renter-occupied housing units	3,262		3,754		492	15.1%
Average household size of renter-occupied units	2.40		2.44		0.04	1.7%

1. Land area of the census blocks that approximate the area. The same boundaries were used for both 2000 and 2010; any differences in land area between 2000 and 2010 reflect changes to census block geography.
2. In combination with one or more of the other races listed. The six numbers may add to more than the total population, and the six percentages may add to more than 100 percent because individuals may report more than one race.
3. "Spouse" represents spouse of the householder. It does not reflect all spouses in a household. Responses of "same-sex spouse" were edited during processing to "unmarried partner."
4. "Family households" consist of a householder and one or more other people related to the householder by birth, marriage, or adoption. They do not include same-sex married couples even if the marriage was performed in a state issuing marriage certificates for same-sex couples unless there is at least one additional person related to the householder by birth or adoption. Same-sex couple households with no relatives of the householder present are tabulated in nonfamily households. "Nonfamily households" consist of people living alone and households which do not have any members related to the householder.
5. Percentage distribution of ownership categories ("owned with a mortgage or a loan" and "owned free and clear") adds to 100 percent.
6. Percentage distribution of vacancy categories ("for rent," etc.) adds to 100 percent.

Sources: U.S. Census Bureau, 2010 Census, Summary File 1; 2000 Census, Summary File 1.
 Tabulated by Population Research Center, Portland State University.

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